

STATE OF SOUTH CAROLINA

Annual Review of Base Rates for Fuel Costs of South Carolina Electric & Gas Company

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

COVER SHEET

DOCKET

NUMBER: 2012 - 2 - E

(Please type or print)

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- Emergency Relief demanded in petition, Request for item to be placed on Commission's Agenda expeditiously, Other:

Table with 2 columns: INDUSTRY (Check one) and NATURE OF ACTION (Check all that apply). Includes categories like Electric, Gas, Railroad, Sewer, etc., and actions like Affidavit, Agreement, Answer, etc.



Matthew W. Gissendanner
Senior Counsel

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March 22, 2012

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

RE: Annual Review of Base Rates for Fuel Costs of South Carolina Electric
& Gas Company, Docket No. 2012-2-E

Dear Ms. Boyd:

Per the request of the Public Service Commission of South Carolina at today's hearing in the above-referenced docket, attached are amended versions of the Direct Testimony of Andy T. Barbee and Michael D. Shinn, which reflect corrections made to each witness's pre-filed direct testimony during today's hearing. Those corrections are as follows:

1. On page 6, line 15, of Mr. Barbee's Direct Testimony, the phrase "in refueling outage" has been deleted and replaced with the phrase "during cycle."
2. On page 6, line 22, of Mr. Barbee's Direct Testimony, the number "36%" has been deleted and replaced with the number "66%."
3. On page 9, lines 6-7, of Mr. Barbee's Direct Testimony, the phrase "is already developing" has been deleted and replaced with the phrase "has developed."
4. On page 15, line 12, of Mr. Shinn's Direct Testimony, the word "BTU" has been added between the words "million" and "when."

By copy of this letter, we are providing the South Carolina Office of Regulatory Staff and the other parties of record with a copy of the amended versions of the Direct Testimony of Andy T. Barbee and Michael D. Shinn and attach a certificate of service to that effect.

If you have any questions or concerns, please do not hesitate to contact us.

Very truly yours,



Matthew W. Gissendanner

MWG/mcs

cc: Mr. John Flitter
Jeffrey M. Nelson, Esquire
Mr. Scott Elliott, Esquire
Mr. Kevin A. Hall, Esquire
Mr. Damon Xenopoulos, Esquire
(all via electronic mail and U.S. first class mail)

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2012 - 2 - E

IN RE:

Annual Review of Base Rates for Fuel)
Costs of South Carolina Electric & Gas)
Company)
)
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_____)

CERTIFICATE OF SERVICE

This is to certify that I have caused to be served this day one (1) copy of South Carolina Electric & Gas Company's **Amended Versions of the Direct Testimony of Andy T. Barbee and Michael D. Shinn** via First Class U.S. Mail and electronic mail to the persons named below at the addresses set forth:

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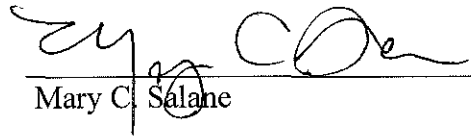
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Cayce, South Carolina
This 22nd day of March, 2012


Mary C. Salane

1 **DIRECT TESTIMONY OF**

2 **ANDY T. BARBEE**

3 **ON BEHALF OF**

4 **SOUTH CAROLINA ELECTRIC & GAS COMPANY**

5 **DOCKET NO. 2012-2-E**

6
7 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION**
8 **WITHIN SOUTH CAROLINA ELECTRIC & GAS COMPANY (“SCE&G”**
9 **OR “COMPANY”).**

10 A. My name is Andy Barbee. My business address is P.O. Box 88,
11 Jenkinsville, South Carolina. I am employed by SCE&G as the Director of
12 Nuclear Training at the Virgil C. Summer Nuclear Station (“VCSNS” or “V.C.
13 Summer”).

14
15 **Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR**
16 **BUSINESS EXPERIENCE.**

17 A. After six years of service in the United States nuclear Navy, I began my
18 career in the electric utility industry in 1983 when Carolina Power & Light
19 Company (“CP&L”) (now Progress Energy) hired me to work at the Shearon
20 Harris Nuclear Station, which at that time was under construction. During my
21 tenure at CP&L from 1983 – 2005, I held several leadership positions at the
22 Shearon Harris Nuclear Station. More specifically, I worked as a licensed

1 operator training instructor, shift technical advisor, shift manager, superintendent
2 of operations support, and superintendent of operations training. While at CP&L,
3 I was granted a Senior Reactor Operator License in 1986 by the Nuclear
4 Regulatory Commission (“NRC”), and in 1993, I received a Bachelor of Science
5 degree in Nuclear Science from the University of Maryland.

6 In 2005, I became employed by Dominion Resources, Inc. (“Dominion”)
7 and worked at Dominion’s Surry Nuclear Power Station until 2009. During my
8 employment at Dominion, I served as the supervisor of operator training and the
9 training manager at Surry Nuclear Power Station.

10 In November 2009, I was hired by SCE&G to work at V.C. Summer as
11 Director of Nuclear Training. As SCE&G’s Director of Nuclear Training, I am
12 responsible for all training related activities at V.C. Summer, which includes the
13 new nuclear units under construction.

14
15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

16 A. The purpose of my testimony is to review the operating performance of
17 VCSNS during the period from January 1, 2011 through December 31, 2011
18 (“Review Period”).

19
20 **Q. WHAT ARE SCE&G’S OBJECTIVES IN THE OPERATION OF VCSNS?**

21 A. SCE&G’s primary objective at VCSNS is safe and efficient operation. The
22 Company also strives for excellence in all phases of operation of the facility. The

1 station's key focus areas of SAFETY, reliability, outage and work management,
2 work force development, and organizational effectiveness constitute our core
3 business plan elements. SCE&G's constant improvement in these areas over the
4 years has facilitated VCSNS's outstanding service record. Furthermore, our
5 business objectives are focused on maintaining a competitive production cost for
6 the generation of electricity using nuclear fuel.

7
8 **Q. WHAT HAS BEEN THE COMPANY'S EXPERIENCE WITH THE**
9 **PERFORMANCE OF THE VCSNS?**

10 A. SCE&G continuously meets or exceeds all NRC requirements and Institute
11 of Nuclear Power Operations ("INPO") standards. VCSNS has performed well
12 during the Review Period. Consistent with the provisions of Section 58-27-865
13 of the South Carolina Code of Laws, as amended, V.C. Summer's net capacity
14 factor based on reasonable excludable nuclear system reductions during the
15 Review Period was 101.1%, and the gross generation output was 7,723,825
16 megawatt hours.

17
18 **Q. DID VCSNS EXPERIENCE ANY FORCED OUTAGES DURING THE**
19 **REVIEW PERIOD?**

20 A. Yes. During the Review Period, VCSNS experienced one forced outage.
21 On January 18, 2011, VCSNS was shut down in order to investigate and repair an
22 oil level indicator used in conjunction with the C reactor coolant pump motor.

1 The unit remained offline for approximately two days, returning to full service on
2 January 20, 2011.

3
4 **Q. PLEASE DESCRIBE THE CIRCUMSTANCES LEADING TO THE**
5 **FORCED OUTAGE OF VCSNS ON JANUARY 18, 2011.**

6 A. While VCSNS was in operation, plant operators received an indication that
7 the oil level in the reservoir for the C reactor coolant pump motor was at a higher
8 than normal level. This prompted SCE&G to investigate the matter while the
9 plant was on-line. During its investigation, the Company discovered that the oil
10 level indicator was not functioning properly because of oil accumulation in a bend
11 in a section of the vent pipe extending from the oil reservoir to the oil level
12 indicator. SCE&G also discovered during its investigation that the oil level in the
13 reservoir was lower than normal. Due to the radiological and industrial safety
14 concerns in the vicinity of the pump motor, the plant was taken off-line in order to
15 repair the bend in the piping and replenish the oil in the reservoir. The unit's
16 response to the shutdown was normal, and all systems responded as designed and
17 required.

18
19 **Q. WHAT MEASURES WERE TAKEN TO RETURN THE UNIT TO**
20 **SERVICE?**

21 A. SCE&G repaired the bend in the piping by removing the damaged section
22 of pipe and replacing it with new piping. The Company then replenished the oil

1 in the reservoir which is required periodically in the course of normal operations.
2 After repairing the piping and replenishing the oil supply, SCE&G then inspected
3 the oil level indicator for the A reactor coolant pump motor as well as the B
4 reactor coolant pump motor and found them to be in proper working condition.
5 VCSNS returned to service on January 20, 2011.
6

7 **Q. DID VCSNS EXPERIENCE ANY PLANNED OUTAGES DURING THE**
8 **REVIEW PERIOD?**

9 A. Yes. During the Review Period, VCSNS experienced one planned outage.
10 On April 14, 2011, the unit began to reduce its generation output in a controlled
11 manner and was shut down completely just before midnight on April 15, 2011, to
12 conduct V.C. Summer's 19th scheduled refueling outage ("RF19"). During this
13 outage, which lasted forty-five (45) days, the Company met all technical
14 objectives and completed scheduled maintenance activities. The reactor returned
15 to criticality on May 29, 2011, and the outage ended with the closure of the
16 generator breaker on May 31, 2011. The planned outage, scheduled for thirty-six
17 and one-half (36½) days, was exceeded by eight (8) days due, in part, to the
18 inclusion of the Alternate Seal Injection scope of work within the RF19 outage
19 work schedule and the limited amount of qualified, skilled-craft labor available at
20 the outset of the outage. The outage was completed with no nuclear safety
21 events.
22

1 **Q. PLEASE EXPLAIN THE KEY MAINTENANCE AND MODIFICATION**
2 **TASKS SCE&G ACCOMPLISHED DURING RF19.**

3 A. During the refueling outage, approximately one-third of V.C. Summer's
4 157 fuel assemblies were replaced, and scheduled maintenance work that cannot
5 be performed when the plant is in operation was conducted. During this time,
6 nearly 3,300 routine tasks including preventative maintenance, corrective
7 maintenance, and surveillance testing tasks were completed successfully.
8 SCE&G completed a number of key maintenance and modification tasks during
9 RF19, a few of which are described below.

- 10 • **Alternate Seal Injection.** Prior to the start of RF19, SCE&G included
11 an additional scope of work within its RF19 outage work schedule
12 which the Company had not included in its original work schedule
13 plans. Rather than wait until the next refueling outage, SCE&G elected
14 to begin installation of an Alternate Seal Injection during RF19. This
15 modification, which will be completed during cycle 20, provides an
16 alternate water source to cool the Reactor Coolant Pump ("RCP") water
17 seal. The pump for the alternate supply is powered by a diesel generator
18 so the cooling source is available during a loss of off-site power.
19 Adequate cooling of the RCP water seal ensures that the water used to
20 cool the reactor is preserved in the event of a loss of off-site power.
21 When completed, SCE&G anticipates that the Alternate Seal Injection
22 will improve estimated core damage frequency by 66%. During INPO's

1 biennial evaluation of V.C. Summer, INPO recognized SCE&G's
2 decision to install Alternate Seal Injection capability during RF19 as
3 showing a strong commitment to nuclear, radiological, and industrial
4 safety.

- 5 • **Digital Electro Hydraulic Control.** The electro hydraulic control
6 (“EHC”) system for the turbine had become obsolete and had several
7 single point vulnerabilities. This prompted SCE&G to install a new
8 Digital EHC system. The new Digital EHC includes redundancy
9 thereby improving the reliability of the turbine control system.
- 10 • **Replacement of Main Generator Breaker.** This modification
11 improved the reliability of the main generator breaker, which had
12 caused unplanned outages in the past.
- 13 • **SW-EFW Cross Connect Cured in Place Piping.** This modification
14 improves reliability of the Emergency Feedwater system by installing an
15 interior lining. The lining inhibits biofouling of the inner pipe wall.
- 16 • **Main Generator Major Inspection.** This scope of work consists of
17 expanded preventative maintenance which is conducted on a three-year
18 frequency.
- 19 • **Replacement of “B” and “X” Batteries.** The periodic replacement of
20 these batteries ensures that important components and instruments
21 continue to operate in the event of power interruption.

1 **Q. WHEN WILL THE NEXT REFUELING OUTAGE OCCUR?**

2 A. Refueling outages are scheduled every 18 months to replace depleted fuel
3 assemblies. Maintenance and testing that cannot be done with the plant on-line
4 are also conducted during the refueling outage. SCE&G's next refueling outage,
5 Refueling Outage No. 20, is scheduled for October 12, 2012.

6
7 **Q. PLEASE EXPLAIN THE ROLES OF INPO AND THE NRC WITHIN THE**
8 **NUCLEAR INDUSTRY AND DESCRIBE ANY RANKINGS RECEIVED**
9 **BY VCSNS FROM THOSE AGENCIES.**

10 A. INPO is a nonprofit corporation established by the nuclear industry to
11 promote the highest levels of nuclear safety and plant reliability. INPO promotes
12 excellence in the industry in the operation of nuclear electric generating plants.
13 During the time period November 7, 2011 to November 18, 2011, INPO
14 conducted its biennial evaluation of V.C. Summer. For the applicable reporting
15 period, INPO rated VCSNS's overall performance as excellent.

16 The NRC is responsible for the licensing and oversight of the civilian use
17 of nuclear materials in the United States. During the Review Period, the NRC
18 reported that VCSNS operated in a manner that preserved public health and safety
19 and fully met all cornerstone objectives.

20

1 **Q. WHAT IS THE SPENT FUEL STORAGE CAPABILITY FOR VCSNS**
2 **AND WHAT IS THE PLAN FOR DEVELOPMENT OF A DRY FUEL**
3 **STORAGE FACILITY?**

4 A. V.C. Summer has sufficient capacity for spent fuel storage in the spent fuel
5 pool through the 23rd refueling outage in 2017. This allows capacity for a full
6 core off-load in addition to the spent fuel stored in the pool. The plant has
7 developed plans for the construction of a dry fuel storage facility that will need to
8 be in service by 2015.

9

10 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

11 A. Yes.

1 **DIRECT TESTIMONY OF**

2 **MICHAEL D. SHINN**

3 **ON BEHALF OF**

4 **SOUTH CAROLINA ELECTRIC & GAS COMPANY**

5 **DOCKET NO. 2012-2-E**

6
7 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT**
8 **POSITION.**

9 A. My name is Michael D. Shinn, and my business address is 220 Operation
10 Way, Cayce, South Carolina 29033. I am currently employed by SCANA
11 Services, Inc. as General Manager of the Coal and Oil Procurement Department
12 (“Fuel Department”). In this position I manage the purchase and delivery of coal,
13 No. 2 fuel oil and limestone on behalf of South Carolina Electric & Gas Company
14 (“SCE&G” or the “Company”) and as agent for South Carolina Generating
15 Company (“GENCO”).

16
17 **Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR**
18 **BUSINESS EXPERIENCE.**

19 A. I earned a Bachelor of Science Degree in Mechanical Engineering from the
20 University of South Carolina in Columbia, South Carolina in 1995. While in
21 college, I was a student intern in the Fossil Hydro Power Plant Performance
22 Group for 5 years. Since graduation, I have held various positions within the Fuel

1 Department to include managing rail transportation and delivery, spot coal
2 purchasing, coal quality management, synthetic fuel optimization and state and
3 federal regulatory reporting. In my most recent position as Manager of Fuel
4 Technical Services, Industrial Coal and Synfuel, I have worked with coal
5 suppliers and SCE&G's power plants to increase fuel and transportation
6 flexibility as well as maximize the utilization of the Company's assets. In
7 December 2009, I was promoted to my current position and report directly to the
8 Senior Vice-President, Fuel Procurement and Asset Management, SCANA
9 Services, Inc.

10
11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to describe the procurement and delivery
13 activities for coal and No. 2 fuel oil used in electric generation for SCE&G as
14 well as GENCO's Williams Station for the period January 1, 2011 through
15 December 31, 2011 (the "Review Period"). I also discuss changes that have
16 occurred in coal markets since the last annual fuel adjustment hearing and how
17 these changes affected coal procurement during the Review Period. Finally, I
18 describe the procurement and delivery of limestone for our wet scrubbers located
19 at our Wateree and Williams steam plants.

1 **Q. PLEASE DESCRIBE GENCO AND ITS RELATIONSHIP TO SCE&G.**

2 A. GENCO was incorporated on October 1, 1984 and owns the Williams
3 Electric Generating Station. GENCO sells to SCE&G the entire capacity and
4 output from the Williams Station under a Unit Power Sales Agreement approved
5 by the Federal Energy Regulatory Commission. Hereafter, when I refer to
6 SCE&G's fossil steam plants, I include GENCO.

7

8 **Q. PLEASE SUMMARIZE SCE&G'S FUEL PROCUREMENT NEEDS AND**
9 **PURCHASING PRACTICES.**

10 A. Under my supervision, the Fuel Department purchases all necessary coal,
11 No. 2 fuel oil, limestone and associated transportation for SCE&G's fossil plants
12 focusing on reliability of supply, conformity with operational and environmental
13 requirements, and reasonable prices. Given its mix of generation assets, SCE&G
14 has significant need for coal in any given year to provide reliable energy service
15 to our customers. In 2011, for example, SCE&G consumed 4,929,754 tons of
16 coal in the production of electricity for its customers. SCE&G's burn rate
17 decreased in 2011 compared to 2010. The burn rate for coal in 2011 was 6.7%
18 lower than in 2010, which is a decrease in coal consumption of 356,402 tons.

19

20

21

1 **Q. HOW DOES THE COMPANY SECURE NECESSARY QUANTITIES OF**
2 **COAL AND NO. 2 FUEL OIL AT COMPETITIVE PRICES?**

3 A. SCE&G maintains an active list of qualified suppliers of coal and No. 2
4 fuel oil used to power its plants. Typically, as contracts expire or needs are
5 identified, solicitations are issued for competitive sealed bids. Responses to these
6 solicitations inform our knowledge of market demand and prices. Moreover,
7 because the responses to these solicitations often include proposals for coal
8 supplies with specifications different than the requested specifications, these
9 responses also aid our ongoing efforts to ascertain price differences for varying
10 qualities of fuels.

11
12 **Q. HOW DOES SCE&G APPROACH THE MARKETPLACE FOR COAL**
13 **AND NO. 2 FUEL OIL?**

14 A. Coal is procured under long-term (more than one year) and spot purchase
15 (up to one year) agreements to achieve a balance of reliable supplies, while
16 maintaining flexibility to react to market changes or short-term system needs.
17 Under normal market conditions, SCE&G seeks to have long-term purchases
18 represent approximately 75% to 80% of projected system demand. Spot
19 purchases provide a mechanism to manage inventories and react to short-term
20 changes in the marketplace, and generally represent 20% to 25% of projected
21 system demand.

1 While SCE&G's goal has been and remains one of balancing its purchases
2 of coal between long-term and short-term contracts, market conditions may alter
3 this goal in any given year. In the Review Period, demand for energy vacillated
4 greatly and was above normal due to a colder than normal winter and warmer
5 than normal summer, but then shifted to below normal demand during the closing
6 months of the year. In addition, natural gas prices remained at very competitive
7 rates for much of the year making it the fuel of choice for economic dispatch in
8 many circumstances.

9 In contrast to the complexities of coal purchasing contracts, contracts for
10 No. 2 fuel oil are requirements contracts that are competitively solicited every
11 two years. Generally, pricing for these contracts is based upon market indices
12 that are adjusted daily.

13
14 **Q. PLEASE SUMMARIZE THE QUANTITY, QUALITY, AND TERM OF**
15 **THE COMPANY'S COAL PURCHASES.**

16 A. During the Review Period, the Company took delivery of 3,942,393 tons of
17 coal under long-term agreements and approximately 835,536 tons of coal through
18 spot purchases. All together, long-term agreements provided 82.51% of the
19 requirement for the Company's five coal-fired stations and GENCO's Williams
20 Station, while spot purchases accounted for the remaining 17.49% of our coal
21 requirements during 2011.

1 For the current period of January 2012 through December 2012, the
2 Company has long-term contracts with seven (7) suppliers for the delivery of 3.4
3 million tons of coal. This quantity represents approximately 68.0% of SCE&G's
4 expected total coal receipts for 2012. The coal purchased under these contracts
5 ranges in quality from 12,300 to 12,700 British Thermal Units ("BTU") per
6 pound and sulfur contents from 0.75% to 1.60%. Most of these contracts are for
7 an initial period of two years with some options to renew. The amount of coal
8 under contract will vary from year to year, and the contract terms will vary from
9 contract to contract. For example, in some of our coal contracts, we have been
10 successful in negotiating fixed pricing for the term of the contract, while other
11 coal contracts contain predetermined price adjustments.

12 Looking forward into 2013, the Company has long-term contracts with
13 three (3) suppliers totaling approximately 2.0 million tons of coal. This quantity
14 represents approximately 61% of SCE&G's expected total coal receipts for 2013.
15 The coal purchased under these contracts is expected to range in quality from
16 12,300 to 12,700 BTU per pound and sulfur contents from 0.75% to 1.60%.

17 During 2012, the Company will continue to carefully evaluate its need for
18 coal in future periods. In 2012, we anticipate that SCE&G will increase its
19 commitments for coal supply under long-term contracts for 2013 and beyond.
20 During the Review Period, coal prices have been relatively stable to slightly
21 decreasing. Prices have been influenced by global demand, environmental

1 regulations, other regulatory requirements, weather patterns and pricing of
2 competitive fuels.

3 To fulfill its future requirements, the Company may choose to negotiate
4 with existing coal suppliers to extend or renew existing long-term contracts, may
5 choose to negotiate directly with other suppliers seeking new contracts, or may
6 decide to issue a general solicitation for some or all of its needed long-term
7 supply. The Company's goal is always to provide our customers with reliable
8 coal-fired generation at reasonable fuel prices. We have worked diligently in the
9 past to achieve this goal, and will continue to do so in 2012 and beyond.

10
11 **Q. HOW DOES SCE&G ENSURE THAT THE RIGHT QUANTITY OF FUEL**
12 **SUPPLIES IS AVAILABLE TO MEET GENERATION DEMANDS?**

13 A. SCE&G uses several steps to bring the fuel supply and demand factors
14 together. Fuel usage levels are calculated and forecasted for each of the
15 generating plants. Coal and No. 2 fuel oil inventories are then validated and
16 contract quantities are summed and compared against system usage to determine
17 needs going forward. With this information, the Fuel Department carefully
18 evaluates the Company's coal requirements and determines whether
19 transportation options under current contracts, spot purchases or additional long-
20 term agreements are appropriate. Through this process, SCE&G has been
21 successful in leveraging long-term and short-term coal purchases to achieve

1 reasonable purchase prices while ensuring the reliability of coal supplies
2 necessary to support system needs.

3 No. 2 fuel oil is purchased to ensure adequate back up to natural gas for
4 SCE&G's intermediate and peaking generators. Contracts are awarded on a
5 biannual basis using competitive bids. Typically, fuel storage tanks are filled
6 going into peak usage periods.

7
8 **Q. HOW DOES THE COMPANY DETERMINE A "REASONABLE PRICE"**
9 **FOR FUEL PURCHASES?**

10 A. The Fuel Department works diligently to achieve an optimization between
11 adequate supplies of acceptable quality at reasonable purchase prices. The
12 ultimate value of the delivered fuel (coal or No. 2 fuel oil) is determined by the
13 actual delivered cost per Million British Thermal Units ("MMBTU"), accounting
14 for any fuel impacts in the operation of our generating plants. Market prices
15 fluctuate due to such things as seasonality, political turmoil, national weather
16 trends and domestic/international supply/demand imbalances. SCE&G
17 continuously evaluates factors that impact prices, while employing contract
18 strategies such as predetermined price adjustments, price collars, and quarterly
19 adjustments to mitigate the effect market conditions have on coal contracts.
20 Market publications, indices, industry solicitations, trade associations, interacting
21 with market participants, and contract negotiations are some of the ways that we
22 stay abreast of market trends and conditions.

1 **Q. HOW DOES THE COMPANY MANAGE COAL INVENTORIES TO**
2 **ENSURE RELIABILITY AND AVAILABILITY?**

3 A. To maintain adequate supply at its coal-fired generating facilities, the
4 Company continuously manages inventories using long-term contracts, spot
5 market purchases, and transportation options under its existing contracts. The
6 Company uses these tools in support of its efforts to maintain an inventory of
7 approximately 925,000 tons of coal based on the average of each of twelve
8 months' ending inventories to support anticipated consumption. This
9 methodology allows for an inventory of more than 925,000 tons at the beginning
10 of high demand periods and less than 925,000 tons entering the milder months.
11 This inventory level aids in protecting SCE&G against availability, production
12 and delivery problems that may arise from time to time. It also affords the
13 resources to meet our supply needs when short-term market prices are
14 unfavorable. It is always important to balance short-term needs against long-term
15 requirements and expected future operating conditions.

16
17 **Q. PLEASE PROVIDE AN OVERVIEW OF TRANSPORTATION RATES**
18 **DURING THE REVIEW PERIOD.**

19 A. In 2011, CSX Transportation, Inc. ("CSX") remained the primary rail
20 transporter of coal for SCE&G. While the CSX contract rates remained relatively
21 stable during 2011, these rates are subject to quarterly adjustments according to
22 indices published by the American Association of Railroads. SCE&G took

1 delivery of approximately 4.8 million tons of coal under this rail contract during
2 2011, representing 100% of the Company's total receipts of coal.

3 Norfolk Southern Railway Company ("NS" or "Norfolk Southern") has
4 only one delivery point in SCE&G's service territory. This delivery point is at
5 Wateree Station and could account for nearly one-third of the Company's need for
6 coal deliveries in some years. However, in 2011 SCE&G was unable to use
7 Norfolk Southern's rail services due to minimum transportation requirements
8 under the CSX contract.

9 SCE&G will continue to explore opportunities to utilize transportation
10 options where they economically exist to reduce costs to our customers. As in the
11 past, the Company will utilize the rail services of Norfolk Southern to maximize
12 benefit to our customers in the short- and long-term as agreements are negotiated
13 where NS is the most economic and reliable transporter.

14
15 **Q. PLEASE DESCRIBE THE STATE OF THE INTERNATIONAL COAL**
16 **MARKET IN WHICH SCE&G PARTICIPATES AND ITS CURRENT**
17 **PLANS REGARDING IMPORT COAL.**

18 A. At the present time international market prices for coal make it
19 uneconomical for SCE&G to import coal. Because the prices for coal in
20 international markets reflect strong demand in these markets for coal, the growing
21 trend is for coal from the United States to be exported to international destinations.
22 For example, CSX reports that it transported for export 42 million tons of coal in

1 2011 and expects a similar trend in 2012. Five years ago the amount of export
2 coal shipped by CSX was only 12 to 13 million tons. Given growing economic
3 activity abroad, reduced domestic coal consumption, and the depressed value of
4 the dollar, it is expected that this trend of increasing exports of domestic coal will
5 continue. As exports of domestic coal into foreign markets grows, pressure will
6 also increase on domestic coal prices over time.

7 Given the current and anticipated demand for coal in international markets,
8 we project the delivered price per MMBTU for foreign coal will exceed domestic
9 prices at least in the short term. Thus, the Company does not currently expect to
10 purchase any import coal via waterborne vessel in 2012. However, SCE&G will
11 continue to monitor and be informed of price changes in foreign markets to ensure
12 that SCE&G and its customers may take advantage of delivered competitive prices
13 in these markets.

14
15 **Q. WHAT WERE SCE&G'S DELIVERED COAL COSTS FOR THE**
16 **REVIEW PERIOD?**

17 A. SCE&G's average cost in dollars per MMBTU by month for coal
18 purchased for steam plants during the Review Period is set forth below in Table 1.

19 Table 1

Jan. 11	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
\$4.25	\$4.37	\$4.48	\$4.34	\$4.36	\$4.35	\$4.36	\$4.56	\$4.46	\$4.48	\$4.46	\$4.52

1 **Q. WHAT CHANGES DOES THE COMPANY ANTICIPATE IN THE COAL**
2 **MARKET FOR THE 2012 FORECASTED PERIOD?**

3 A. Notwithstanding the growing demand in foreign markets, SCE&G's coal
4 prices for the forecasted period are expected to remain stable or trend downward
5 slightly due to projections that we may increase spot coal purchases at prices
6 below our long term contract prices. For example, over the past 12 months, the
7 price per ton of Central Appalachian coal decreased from \$75.00 per ton on
8 January 31, 2011, to \$68.25 per ton on December 31, 2011, representing
9 approximately a 10% decrease. Spot coal prices have further moderated in early
10 2012, decreasing to approximately \$60.00 per ton. While we do not expect any
11 further substantial reduction in prices in 2012, we do believe spot prices will
12 remain favorable and relatively stable.

13 Global demand for coal, particularly metallurgical coal used to produce
14 steel, has resulted in sharp increases in the price of domestic metallurgical coal in
15 the recent past. The price of domestic coal available to utilities is now more
16 frequently being priced on the international market with price movements trending
17 up or down based on international indices. The growth of coal exports into
18 Europe has doubled between 2009 and 2011 with the growth trend expected to
19 continue. This trend in part reflects the ongoing shift from nuclear generation to
20 coal-fired generation of electricity in some European countries, most notably
21 Germany. However, even with the increase in coal exports to European as well as
22 Asian markets, the increased use of natural gas for power generation and

1 decreased industrial demand will continue to force coal companies to reduce
2 production to conform to overall reduced demand for coal as an energy source.

3 Other factors that continue to affect production include a dwindling coal
4 reserve base, greater regulation by the Environmental Protection Agency (“EPA”)
5 and Mine Safety and Health Administration (“MSHA”), the redeployment of
6 capital dollars to metallurgical mines versus steam coal mines, the ability to
7 borrow money for recapitalization of mines in general and the inability of mining
8 companies to acquire new mining permits. These factors will continue to put
9 upward pressure on coal production costs during 2012 and beyond.
10 Notwithstanding these upward pressures, the Company expects coal prices to
11 remain relatively stable in 2012. This expected stability in coal prices in 2012 is
12 driven primarily by the low cost of natural gas coupled with the addition of new
13 combined cycle gas generation coming on line outside of SCE&G’s service area,
14 resulting in reductions in the demand for coal.

15
16 **Q. WHAT HAS BEEN THE RECENT PRICING TREND IN THE NO. 2 FUEL**
17 **OIL INDUSTRY?**

18 A. Delivered No. 2 fuel oil average monthly prices during the Review Period
19 ranged from a low of \$19.92/MMBTU in January of 2011 to a high of
20 \$24.12/MMBTU in November of 2011. This pricing was up considerably from
21 2010 reflecting increased domestic consumption, actions of the Organization of

1 Petroleum Exporting Countries or OPEC, increasing demand in Asian markets
2 and continued political instability in oil producing countries.

3 Set forth below is Table 2 that shows the average system delivered No. 2
4 fuel oil prices in \$/MMBTU for the Review Period for No. 2 fuel oil purchased for
5 steam plants, gas turbines and combined cycle units.

6 Table 2

Jan. 11	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
\$19.92	\$21.01	\$23.39	\$24.25	\$22.93	\$22.75	\$23.88	\$22.54	\$22.91	\$23.01	\$24.12	\$22.23

7
8
9 **Q. WHAT ADDITIONAL STEPS IS THE COMPANY TAKING TO**
10 **MITIGATE FUEL-RELATED EXPENSES?**

11 A. SCE&G continues to expand its coal specifications by purchasing coal of
12 lower quality where practicable and acceptable to a coal-burning plant. During
13 2011, SCE&G took delivery of 908,874 tons with contracted BTU per pound
14 values less than its traditional specifications. A substantial portion of this coal was
15 blended and consumed at SCE&G's Cope Station.

16 As mentioned earlier in my testimony, SCE&G has the ability to take coal
17 deliveries from Norfolk Southern, a competing railroad with the CSX, for use at
18 our Wateree Station in Eastover, South Carolina. We will utilize Norfolk
19 Southern when possible and economically beneficial to our customers. Currently,
20 Wateree Station is the only plant in SCE&G's system which has the capability to

1 take delivery from two different rail carriers. SCE&G's other plants are limited to
2 CSX for plant direct rail delivery.

3 SCE&G is also evaluating the fuel flexibility for all of its coal-fired plants.
4 This evaluation considers fuels from different regions of the United States and
5 South America with multiple sulfur, ash and BTU levels. Currently, transportation
6 rates, and in some cases original plant design, make coal from other basins non-
7 competitive with Central Appalachia due in large part to significant differences in
8 coal qualities that could impact plant operations.

9 In 2012, SCE&G will test burn an Illinois Basin coal blend at Cope Station
10 to gauge the impact on operational costs and plant reliability. Although coal from
11 the Illinois Basin does not meet SCE&G's system coal quality specifications, this
12 coal could yield a very competitive delivered cost per million BTU when
13 compared to Central Appalachian coals, if our test burns demonstrate that
14 operational costs and reliability are not adversely impacted.

15
16 **Q. DO SCE&G'S COAL-FIRED PLANTS HAVE LIMITATIONS THAT**
17 **RESTRICT EXPANDING FUEL SPECIFICATIONS?**

18 A. Yes, they do. Original plant design is the major limitation to expanding our
19 fuel specifications beyond our current specifications, while maintaining plant
20 reliability and complying with growing environmental restrictions. As mentioned
21 earlier, these limitations are being carefully analyzed and evaluated. The goal is to
22 expand fuel specifications where reasonably possible, allowing the Fuel

1 Department to buy the most competitively priced fuel for reliable operation of our
2 coal-fired plants.

3 Higher quality coal that must be purchased to comply with stricter
4 environmental laws for certain power plants is also a limitation to expanding fuel
5 specifications. Normally these coal supplies will be lower in sulfur content and
6 have a higher market price than coal containing higher sulfur levels. As
7 restrictions on emissions increase, fuel prices are likely to be impacted if the
8 availability of the fuel needed to meet new requirements is in limited supply.

9
10 **Q. WHAT RESPONSIBILITIES DOES THE FUEL DEPARTMENT HAVE**
11 **WITH RESPECT TO SO₂ AND NO_x ALLOWANCES?**

12 A. The Fuel Department purchases or trades EPA sulfur dioxide (“SO₂”) and
13 nitrogen oxides (“NO_x”) emission allowances as needed by SCE&G.

14 The Clean Air Act Amendment of 1990 requires electric utilities to reduce
15 SO₂ emissions. An SO₂ Emission Allowance Trading Market was established by
16 the EPA to assist utilities in managing the costs of complying with these new
17 regulations. The Company has purchased SO₂ allowances as part of our overall
18 strategy to compensate for our SO₂ emissions. SO₂ emission allowance prices
19 have decreased during the Review Period due to the addition of scrubbers in the
20 industry as well as continued uncertainty over EPA modifications to
21 environmental regulations for the utility industry. SO₂ allowances are

1 approximately \$2.00 per allowance (one ton SO₂) currently and are not expected
2 to increase significantly until the EPA gives final guidance on the issue.

3 The Fuel Department also addresses the Company's needs for NO_x
4 emission allowances. Current annual NO_x allowance prices are approximately
5 \$45.00 per ton.

6
7 **Q. PLEASE EXPLAIN THE FUEL DEPARTMENT'S ACTIVITIES**
8 **RELATED TO THE PROCUREMENT OF LIMESTONE FOR SCE&G'S**
9 **POLLUTION CONTROL FACILITIES.**

10 A. The Fuel Department is responsible for securing adequate and reliable
11 supplies of limestone for the effective operation of wet limestone scrubbers at
12 Wateree and Williams Stations. There are limited suppliers for limestone for the
13 Company's Williams and Wateree Stations. During the Review Period, the
14 Company acquired a majority of its supplies of limestone from a single source.

15 The Company continues to evaluate potential new suppliers to determine if
16 their products are operationally and chemically sufficient for use in the scrubbing
17 process. Other potential sources of supply have been identified and preliminary
18 tests have been conducted. However, more testing is required to determine
19 whether these alternatives are viable.

20 The limestone is delivered to Williams and Wateree Stations by truck since
21 the current source of supply is located near the plants. In summary, the Company
22 continues to evaluate supply and transportation options designed to ensure

1 adequate and reliable supplies of limestone at reasonable prices at its Williams and
2 Wateree Stations.

3
4 **Q. PLEASE PROVIDE THE COMMISSION WITH AN UPDATE**
5 **CONCERNING LEGAL ACTION TAKEN BY SCE&G AGAINST SOME**
6 **COAL SUPPLIERS.**

7 A. In 2009, the Company initiated legal action against several of its coal
8 suppliers for non-performance. The Company's claims against all suppliers but
9 one have either been settled or litigated before the American Arbitration
10 Association. The one unresolved case is scheduled to be heard, subject to any
11 scheduling delays that may arise, later this year before the American Arbitration
12 Association. Net benefits received as a result of resolved claims were applied to
13 reduce fuel costs when the benefits were realized. Any future benefits will
14 likewise be applied to reduce fuel costs when the benefits are realized.

15
16 **Q. WHAT REQUEST DOES SCE&G MAKE OF THE COMMISSION IN**
17 **THIS PROCEEDING?**

18 A. The Coal and Oil Procurement Department has made reasonable and
19 prudent efforts to obtain reliable, high quality supplies of coal, No. 2 fuel oil and
20 limestone and associated transportation at the lowest possible cost to SCE&G's
21 customers. Therefore, on behalf of SCE&G, I respectfully request that the

1 Commission find that the Company's fuel purchasing practices were reasonable
2 and prudent for the Review Period.

3

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A. Yes.